



June 9, 1993

Ms. Debbie Robinson
U.S. Environmental Protection Agency
1200 Sixth Avenue, Mail Stop HW-114
Seattle, Washington 98101

Subject: Site Inspection Prioritization-Level II
Owens Corning Fiberglass Corp., St. Helens, Oregon
EPA ID No. ORD 09347 6109
Work Assignment C1003956
Contract 068-W9-0009

Dear Ms. Robinson:

PRC Environmental Management, Inc. (PRC) has completed a Level II site inspection prioritization (SIP) for the former Owens Corning Fiberglass Corporation (Owens Corning) site in St. Helens, Oregon. The facility is currently owned and operated by Armstrong World Industries (Armstrong). The evaluation was based on a review of U.S. Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality (DEQ) files and documents obtained from Armstrong as well as observations made during a site visit conducted by PRC on April 14, 1993. Attachment I contains the photographs taken during the site visit.

Site Visit

PRC conducted a site visit on April 14, 1993. PRC met with the following Armstrong personnel who escorted PRC around the site and answered questions about past and present operations:

- Bob Lalande, Armstrong facilities and environmental coordinator
- John Bertz, Armstrong plant engineering manager
- Wieslaw Gondek, Armstrong process chemical engineer
- Soon Teoh, Armstrong plant chemist/quality assurance manager
- Mike Kerker, Armstrong environmental specialist, (Armstrong headquarters, Lancaster, Pennsylvania)

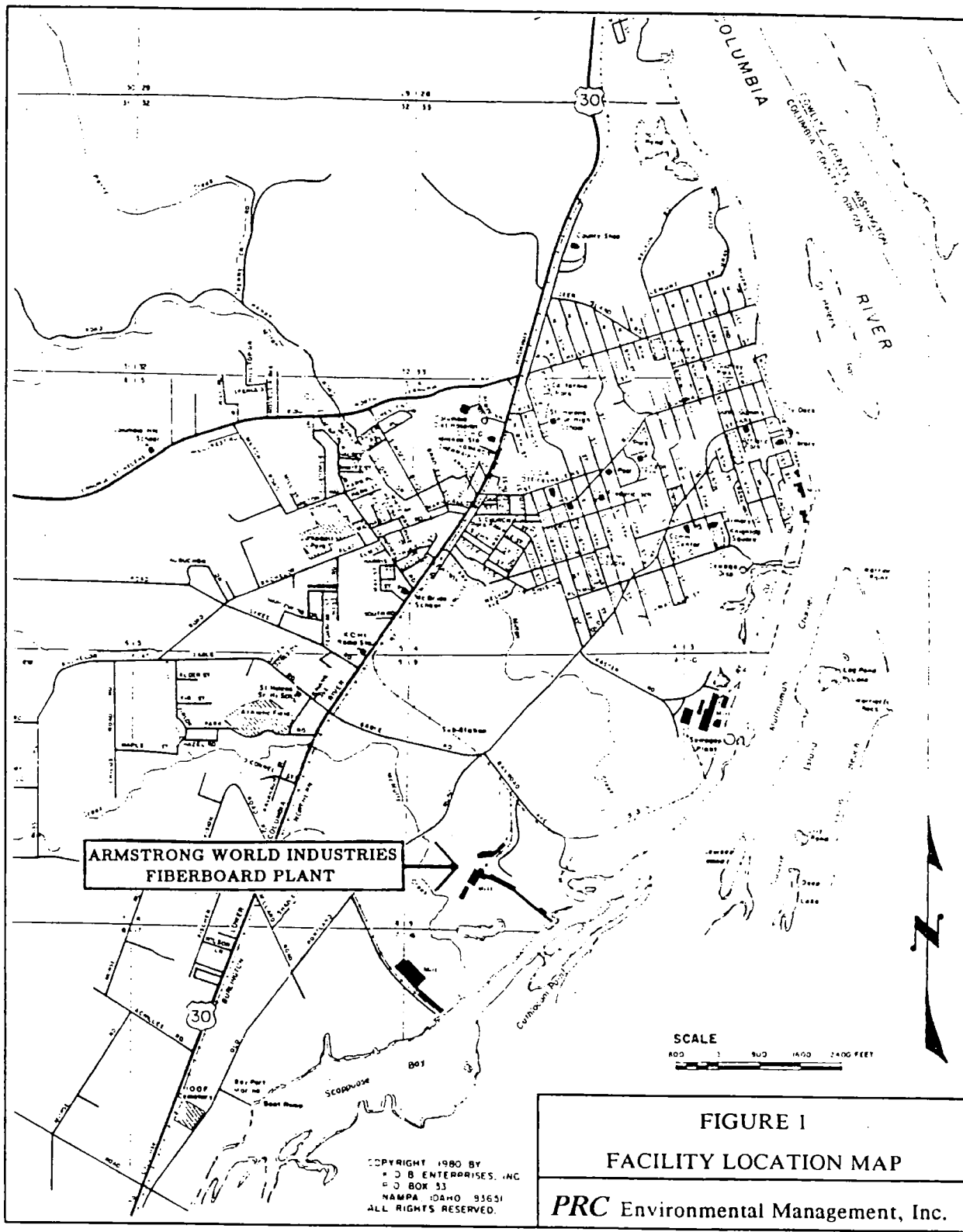
Background

The Armstrong facility is located at 1645 Railroad Avenue, approximately 1 mile south of St. Helens, Oregon (see Figure 1). Of the site's 175 acres, only 74 acres are considered developable; the remainder of the property consists of submerged land, tidal areas, and seasonally inundated lands. The site is bordered by Scappoose Bay, Milton Creek, tidelands, and residential and light industrial land. Multnomah Plywood, located about one-half mile southwest of the facility and bordering Scappoose Bay, is no longer in operation. Boise Cascade is located about 1 mile northeast of the facility on Multnomah Channel.

USEPA SF



1443748



ARMSTRONG WORLD INDUSTRIES
FIBERBOARD PLANT

SCALE
0 800 1600 2400 FEET

FIGURE 1
FACILITY LOCATION MAP
PRC Environmental Management, Inc.

The manufacturing plant was built in 1929-30 by the Fir-Tex Company. It was later sold to the Dant and Russell Company, which manufactured wood fiber ceiling board and building products. In 1956, Kaiser Gypsum (Kaiser) purchased the plant and continued to manufacture wood fiber products. Kaiser's operations also included an asphalt coating operation. Kaiser also attempted to manufacture mineral fiber products. In 1978, Owens Corning purchased the plant and continued to manufacture both wood fiber and mineral wool building products. In 1982, Owens Corning shut the plant down.

The facility was acquired by Armstrong in 1984; manufacturing operations resumed in 1987. Approximately 175 people are currently employed. Armstrong manufactures fiberboard manufactured from recycled newsprint and mineral wool fibers, which are a slag waste produced by steel mills. A map showing site features is provided as Figure 2.

Wastewater

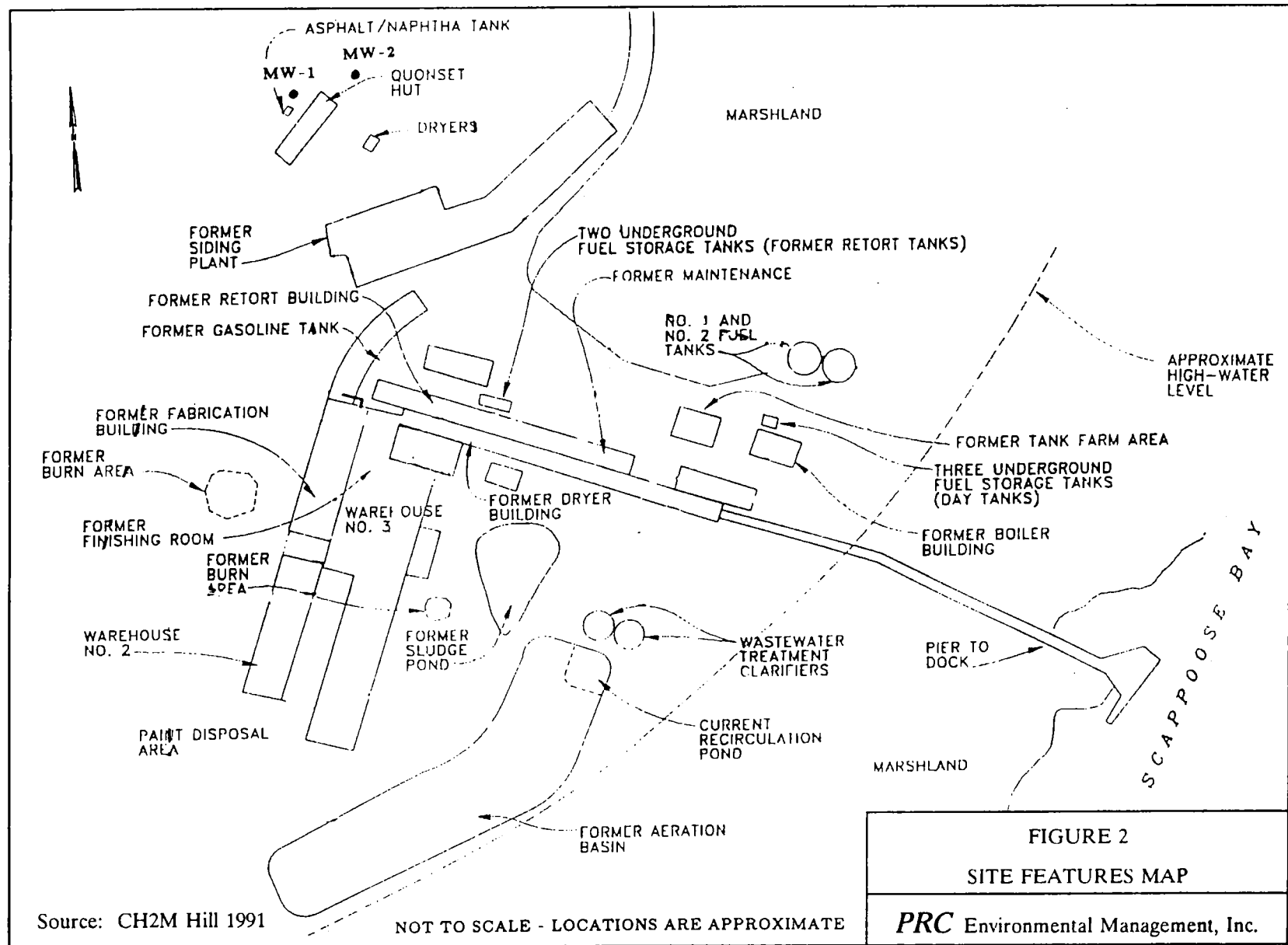
Between 1930 and 1960, raw wastewater was discharged to Scappoose Bay. In 1960, a secondary treatment system was built to treat process wastewaters. It consisted of a cement primary clarifier, a rock-lined aeration basin, and a cement secondary clarifier. The effluent was then discharged to Scappoose Bay under a National Pollutant Discharge Elimination System (NPDES) permit. This discharge continued until Owens Corning shut down in 1982. During the 1970s, the discharge may have contained arsenic. An effluent sample analyzed in 1980 for priority pollutants contained 9.08 ppb methylene chloride, 1.126 ppb pentachlorophenol, and 1.52 ppb di-n-butylphthalate. In 1980, 400,000 gallons of dredge solids were removed from the clarifier and aeration lagoon and transported to the Santosh Disposal Facility, located in the town of Scappoose.

In 1973, built up solids were removed from the aeration lagoon and placed in to an unlined sludge holding pond. Approximately 7,200 cubic yards sludge remains in the holding pond. The sludge was tested by Owens Corning in 1980 for Extraction Procedure (EP) Toxicity and trace amounts of arsenic (10 ppb), antimony (2 ppb), and selenium (10 ppb) were found.

In April 1989, the liquid contents of the aeration lagoon were drained into Scappoose Bay. A special permit was issued by the DEQ for the discharge of the wastewater to Scappoose Bay. As part of this operation, samples of water and sediment were collected and analyzed for volatile and semivolatile organic compounds by MEI Charlton, Inc. The highest levels of contaminants detected in the sediment samples were carbon disulfide (10 ppb), 2-butanone (17 ppb), toluene (36 ppb), monoterpenes (220 ppb), di-n-butyl-phthalate (1,400 ppb), chrysene (5,700 ppb), and pyrene (1,400 ppb). Methylene chloride and acetone (thought to be laboratory contamination), alkanes, and unknown compounds were also present in the samples.

The remaining 6 inches of sediment in the aeration lagoon was mixed with sand, and the lagoon was backfilled with soil. A small portion of the northeast corner was not backfilled but was instead lined with Hypalon to create a 325,000-gallon recirculation pond. At the time of the site visit, the pond was being used as a surge pond to even out the flow into the primary clarifier. Aeration type jets are used to keep the solids in suspension until the wastewater is routed to the clarifier.

Currently, primary treatment is used to recover solids that are then recycled into the process. A portion of the wastewater is also reused in the process; the remainder is sent to the municipal



sewage treatment plant. The only discharge to Scappoose Bay since Armstrong began operations occurred when the pond was drained.

Previous Investigations

In 1987, Armstrong hired CH2M Hill to conduct an environmental survey of the site. The survey included investigating aboveground and underground storage tanks, transformers, and asbestos. One of the eight transformers contained greater than 50 ppm polychlorinated biphenyls. This transformer was situated on a platform in the finishing area and has no secondary containment. No visible contamination was reported near any of the transformers during the survey.

Asbestos was used in limited quantities as a raw material in the early 1960s, and material burned on site may have contained asbestos. A burn area was used for solid wastes such as crates, reject fiberboard, and other fairly inert wastes. In 1986, Owens Corning collected surface soil samples for asbestos analysis. No asbestos was detected in the sample from the burn area. No sign of the burn area could be seen during the site visit. Several underground storage tanks (containing fuel) and aboveground storage tanks were also investigated. According to Armstrong, CH2M Hill was hired to empty and clean out all of the tanks. A former aboveground tank farm was used to store fuel, asphalt, and caustic. The survey report (CH2M Hill 1987) stated that, other than some minor surface stains, there were no visible signs of spillage or leakage from these tanks.

The only significant contamination reportedly found during the survey was associated with the aboveground asphalt-naphthalene tank located near the Quonset hut. An area between the Quonset hut and the tank was identified as being covered with "asphalt-naphtha like material." The material had also been deposited along and over an embankment located northeast of the Quonset hut.

In October 1987, two monitoring wells were installed by CH2M Hill, and groundwater samples were collected and analyzed for volatile organic compounds, semivolatile organic compounds, and oil and grease. Trace amounts (3 ppb) of toluene were detected in the sample from MW-1, and methyl isobutyl ketone was detected in the MW-2 sample (5 ppb). In addition, 11 ppb of bis-2-ethylhexyl phthalate was found, and 3 ppm of oil and grease were detected in both wells.

In 1989, SRH Environmental Management (SRH) was contracted to investigate the general extent of soil contamination and to resample the monitoring wells. Five soil and two groundwater samples were analyzed. The only detection in groundwater samples was oil and grease (both wells) at concentrations of 2.2 and 2.9 ppm. Ethyl benzene (130 ppb), toluene (120 ppb), and xylene (2,400 ppb) were detected in a composite soil sample collected near the Quonset hut. The other four soil samples analyzed contained only methylene chloride, probably attributable to laboratory contamination.

SRH also sampled sawdust piles and a waterline trench that appeared to be contaminated. Samples from the sawdust piles contained a total petroleum hydrocarbon (TPH) concentration of 750 ppm. The waterline trench sample contained 52,000 ppm TPH.

Sources

Former Aeration Lagoon. The former lagoon capacity was 8 million gallons. Assuming an 8-foot depth, the lagoon would have covered approximately 3 acres. At the time of the site visit, the surface was flat and vegetated, with no visible indications of contamination.

Former Sludge Holding Pond. During the site visit, PRC observed some crumbly light gray material present in small patches on the surface of the sludge holding pond. Armstrong personnel stated that this material was probably the sludge that was deposited after it was removed from the aeration lagoon. The remaining surface of the former pond was heavily vegetated. The area of the former sludge holding pond was just under 20,000 square feet and it was approximately 10 feet deep.

Waste Pile Containing Contaminated Soil. During the site visit conducted by PRC, a waste pile containing contaminated soil that had been excavated was present in the area of the Quonset hut. It appeared that the pile had once been covered with plastic; however, most of the pile was exposed to the elements. The dimensions of the waste pile were estimated to be 15 by 20 by 8 feet high.

Potentially Contaminated Soil Near the Quonset Hut. During the site visit, there was no visible indication of contamination near the Quonset hut. The area was densely vegetated, and no sign of vegetative stress was shown.

Potential Receptors

Armstrong is located on the shore of Scappoose Bay on Multnomah Channel, which empties into the Columbia River approximately 1.5 miles from the site. Extensive wetlands border the site and are scattered throughout the vicinity. There are four drinking water wells within 4 miles of the site that serve approximately 1,600 people. However, none of these wells is downgradient of the site. There are also two "Rennie" collectors located in the bedrock aquifer beneath the Columbia River 1.5 miles downstream of the site, serving 8,000 people in the city of St. Helens. In addition, three surface water intakes in the Columbia River, all approximately 5 miles downstream of the site, serve people in the town of Scappoose, the Goble Water Association, and the city of Prescott (a total of approximately 4,000 people). The downstream segment of Columbia River provides an estimated 7 million pounds of fish for human consumption each year.

Recommendations

No further action by the Superfund Program is recommended at this site; however, the waste pile of contaminated soils and any remaining soil contamination in the vicinity of the Quonset hut should be assessed and removed under the guidance of the appropriate regulatory authority. No sampling by EPA is recommended at this time.

Information Sources

Ecology and Environment, Inc. 1984. Site Inspection Report. December 21, 1984.

Ecology and Environment, Inc. 1988. Site Inspection Reassessment/Preliminary HRS Score for Owens-Corning Fiberglass Plant, St. Helens, Oregon. March 28, 1988.

Ms. Debbie Robinson
June 9, 1993
Page 7

CH2M Hill 1987. Environmental Survey of Owens Corning Fiberglass Plant, St. Helens, Oregon.
January 29, 1987

CH2M Hill 1988. Letter Report to Armstrong World Industries Re: St. Helens, Oregon, Building
Board Plant. January 7, 1988.

SRH Environmental Management 1989. Report on Limited Remediation Activities, Armstrong
World Industries, Inc., St. Helens, Oregon Facility. October 30, 1989.

ODEQ 1989a. Letter to CRSS Serrine (Armstrong council) Re: Special Permit. April 3, 1989.

MEI-Charlton 1989. Letter Report Re: Sampling and Analysis of Bottom Sediment and Water
from Lagoon. March 9, 1989.

ODE 1989b. Interoffice Memorandum Re: Sample Plan for On-Site Lagoon (at Armstrong),
February 13, 1989.

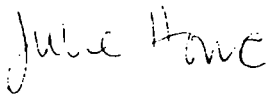
Armstrong 1988. Letter to DEQ Re: EP Toxicity Analysis, BOD, & SS Aeration Basin,
Armstrong World Industries, Inc. - St. Helens Plant. November 30, 1988.

The contact person for the facility is :

Bob Lalande, Facilities and Environmental Coordinator
Armstrong World Industries
1645 Railroad Avenue
St. Helens, Oregon
503/397-7661 or 503/397-0704

A Comprehensive Environmental Restoration, Compensation, and Liability Act/National Priority
List eligibility checklist is attached. Please contact me or Mary Bandrowski at 624-2692 if you
have any questions about this SIP.

Sincerely,



Julie Howe
Site Manager

cc: Mary Bandrowski, Project Manager, PRC

ATTACHMENT 1
PHOTOGRAPHS



Photograph: 1	Date: 4/14/93	Taken By: Howe	Direction Facing: South
Description: Recirculation pond; former lagoon location in background			



Photograph: 2	Date: 4/14/93	Taken By: Howe	Direction Facing: Southeast
Description: Primary clarifier			



Photograph: 7	Date: 4/14/93	Taken By: Howe	Direction Facing: South
Description: Former effluent pipe and current wetlands			

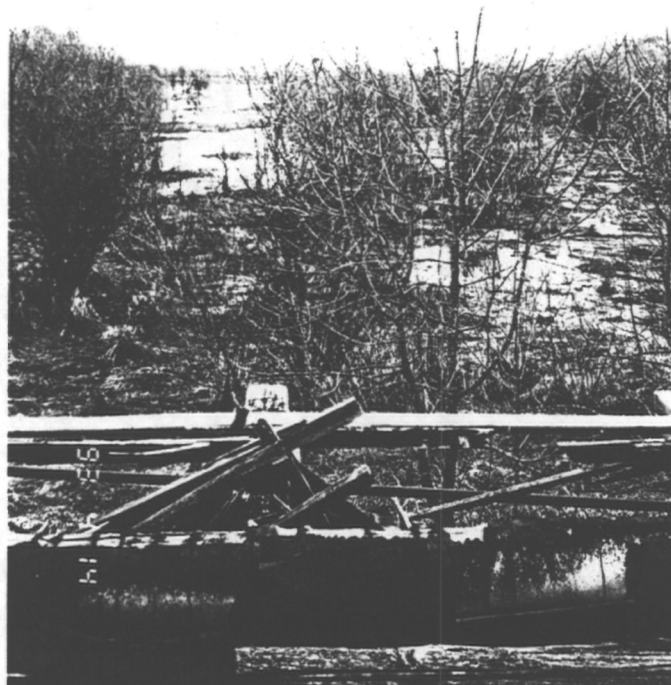
Photograph: 8

Date: 4/14/93

Taken By: Howe

Direction Facing: Southwest

Description: Former effluent pipe (closest to front) with Scappoose Bay wetlands in background.

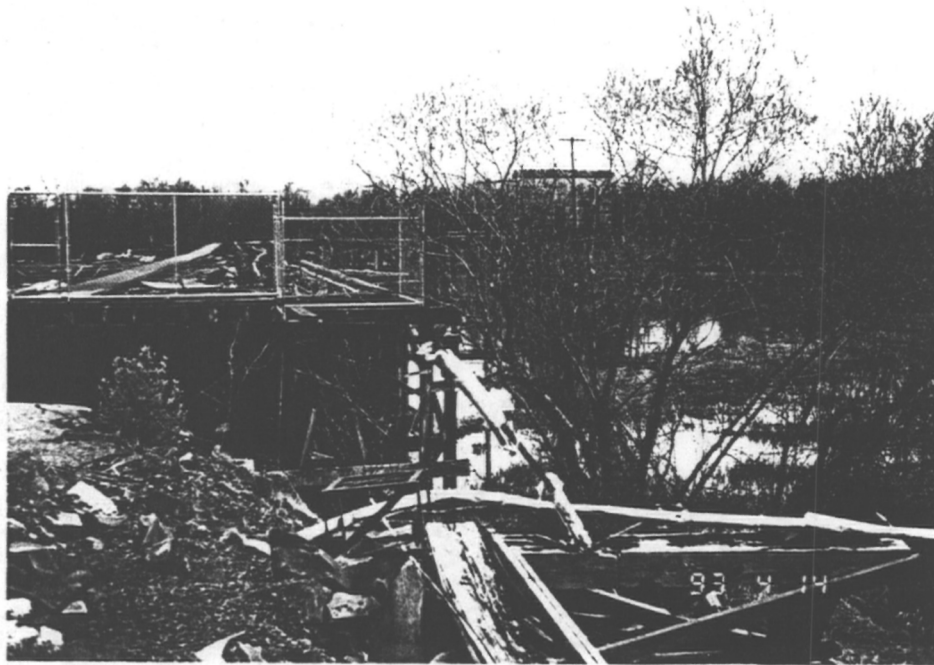




Photograph: 3	Date: 4/14/93	Taken By: Howe	Direction Facing: Northwest
Description: Location of former sludge holding pond (foreground)			



Photograph: 4	Date: 4/14/93	Taken By: Howe	Direction Facing: N/A
Description: Surface of former sludge holding pond			



Photograph: 5	Date: 4/14/93	Taken By: Howe	Direction Facing: Southeast
Description: Former outfall location (at reddish building in background) and old pier			



Photograph: 6
Date: 4/14/93
Taken By: Howe
Direction Facing: Northwest
Description: Old effluent pipe (center), and water intake pipes.



Photograph: 9

Date: 4/14/93

Taken By: Howe

Direction Facing: South

Description: Monitoring well MW1 in front of old asphalt/naptha tank structure.



Photograph: 10

Date: 4/14/93

Taken By: Howe

Direction Facing: North

Description: Monitoring well MW1 in area of potential past spillage



Photograph: 11	Date: 4/14/93	Taken By: Howe	Direction Facing: Southwest
Description: Waste pile of soils excavated near the quonset hut			



Photograph: 12	Date: 4/14/93	Taken By: Howe	Direction Facing: North
Description: Location of former burn area			



Photograph: 13	Date: 4/14/93	Taken By: Howe	Direction Facing: Unknown
Description: Old sawdust pile			